Monitoring Data Record

Project Title: Twin Oaks (R-2302) COE Action ID: 199920857
Stream Name: Perennial stream flowing into the New River DWQ Number: 990491
City, County and other Location Information: Sta. 39+50 – 48+50 on US 21 S of Twin Oaks
Date Construction Completed: N/A Monitoring Year: (1) of 1
Ecoregion: 8 digit HUC unit 05050001
USGS Quad Name and Coordinates:
Rosgen Classification:
Length of Project: 1334' Urban or Rural: Rural Watershed Size:
Monitoring DATA collected by: M. Green, M. Weatherford Date: 8/17/05
Applicant Information:
Name: NCDOT Roadside Environmental Unit
Address: 1425 Rock Quarry Road Raleigh, NC 27610
Telephone Number: (919) 861-3772 Email address: mlgreen@dot.state.nc.us
Consultant Information:
Name:
Address:
Telephone Number: Email address:
Project Status: Complete

Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.): Level (**1**) ~~2~~ ~~3~~
Monitoring Level 1 requires completion of *Section 1, Section 2 and Section 3*
Permit States: NCDOT shall visually monitor the vegetative plantings and insure complete stabilization of the stream. This monitoring shall include visual monitoring of planted vegetation quarterly for a minimum of one year after final planting.

Section 1. PHOTO REFERENCE SITES
(Monitoring at all levels must complete this section)

Attach site map showing the location and angle of all reference photos with a site designation (name, number, letter, etc.) assigned to each reference photo location. Photos should be provided for all structures and cross section locations, should show both banks and include an upstream and downstream view. Photos taken to document physical stability should be taken in winter. Photos taken to document vegetation should be taken in summer (at representative locations). Attach photos and a description of each reference photo or location. We recommend the use of a photo identification board in each photo to identify location.

Total number of reference photo locations at this site: 4 reference points, 2 photos at each
Dates reference photos have been taken at this site: 12/08/03, 5/19/04, 5/17/05, 8/17/05

Individual from whom additional photos can be obtained (name, address, phone):

Other Information relative to site photo reference: Photo 9 documents undercutting of stream bank.

If required to complete Level 3 monitoring only stop here; otherwise, complete section 2.

Section 2. PLANT SURVIVAL
Attach plan sheet indicating reference photos.

Identify specific problem areas (missing, stressed, damaged or dead plantings):

Estimated causes, and proposed/required remedial action:

ADDITIONAL COMMENTS: Stream is highly vegetated with lespedeza, *Juncus* sp., sedge, goldenrod, briars, pokeweed, jewelweed, and various thick grasses. Trees that were noted are black willow, silky dogwood, tulip poplar, and sweetgum. The lower portion of the stream lacks some woody vegetation but tulip poplar are coming in naturally on this portion of the stream.

If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

Section 3. CHANNEL STABILITY

Visual Inspection: The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

For the most part the stream is very stable at this time. There is some undercutting of the streambank noted in photo 9 due to high water flows or hillside runoff on the lower portion of the stream. As stated in the 2nd quarter report there is some severe hillside erosion above the silt fence away from the stream near STA 40. However, erosion has not altered the stream at this time. Repairs to the roadway embankment have not taken place. Erosion control measures are still continuing to be maintained to prevent sediment loss.

Date Inspected	Station Number	Station Number	Station Number	Station Number	Station Number
Structure Type	STA. 40				
Is water piping through or around structure?					
Head cut or down cut present?					
Bank or scour erosion present?	Hillside erosion above the silt fence.				
Other problems noted?					

NOTE: Attach separate narrative sheets to each monitoring report describing/discussing the overall monitoring results. Include the identification of specific problem areas/channel failures, estimated cause and proposed/required remedial action. This should include a brief discussion of any parameter that has changed significantly from as-built.

Twin Oaks

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

4th Quarter – August 2005

Twin Oaks

Photo 7

Photo 8

Photo 9 (undercutting of streambank)